

DPW – Environmental Division
Energy Branch



Family Housing Energy Summary

Fiscal Years 1998 - 2001

Allen Simpson

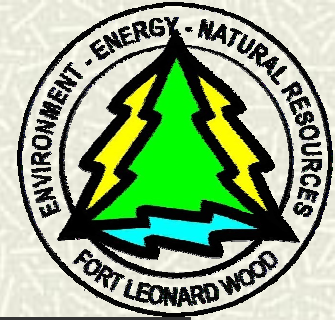
Ron Pemberton

ELECTRIC USE & COST



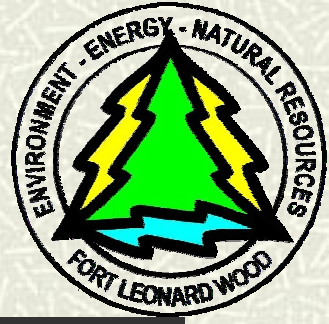
	KWH'S		COST
	USED	COST	KWH
FY98	29,825,081	\$1,723,929	\$0.0578
FY99	30,566,950	\$1,766,797	\$0.0578
FY00	34,735,921	\$1,608,397	\$0.0463
FY01	33,438,910	\$1,571,907	\$0.0470

NATURAL GAS USE & COST



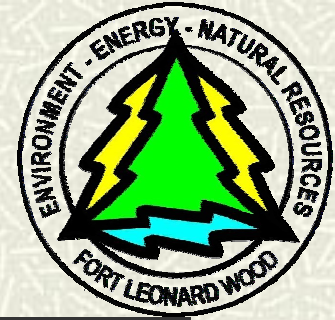
	Cubic Feet Used	Natural Gas Cost	Average Cost Cubic Foot
FY98	177,836,081	\$2,783,633	\$0.0157
FY99	142,398,642	\$2,833,565	\$0.0199
FY00	169,998,060	\$2,839,370	\$0.0167
FY01	201,519,884	\$3,807,043	\$0.0189

COST PER SQUARE FOOT



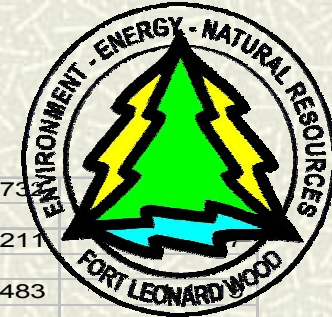
FY	ELC & NAG COST	FH TOTAL FT2	AVG COST/FT2	% CHG	TONS AC	% CHG
FY98	\$4,507,562	3,367,000	\$1.3387		6,309	
FY99	\$4,600,362	3,217,000	\$1.4300	6.8%	6,153	-2.5%
FY00	\$4,447,767	3,195,000	\$1.3921	-2.7%	6,218	1.1%
FY01	\$5,378,950	3,198,000	\$1.6820	20.8%	6,218	0.0%

Total Consumption by Fiscal Year



	Electric MBTU's	Natural Gas MBTU's	Total MBTU's	Percent Change	Weater Adjusted Use
FY98	101,793	183,349	285,142		292,847
FY99	104,325	146,813	251,138	-11.9%	263,978
FY00	118,554	175,268	293,822	17.0%	321,392
FY01	114,127	207,767	321,894	9.6%	321,859

FH ELECTRIC BILL – 1



O	2-4 THAYER	1,758	#4200	81	142,398	:	2,731	
P	6-8 THAYER	2,070	#4202	19	39,330	:	3,211	
S	1 KIRBY (AVG)	2,108	#4501	15	24,721	:	1,483	
T	9 KIRBY (AVG)	1,900	#4509	9	15,043	:	1,504	1.1113
P	54-56 THAYER	2,318	#4230	50	115,900	:	3,084	0.7516
BLDG TYPE	METER LOCATION	KWH USAGE	OTHER	# OF UNITS	TOT KWH USAGE	:	FT2	MONTHLY USE/FT2
X----- NCO'S HOUSING AREA -----X								
V-4	75-81 CABLE	4,080	#9281	28	114,240	:	4,944	0.8252
J	18-19 KELLY-FUNK	2,022	#8532	8	16,176	:	2,128	0.9502
I-4	25-31 TURNER	6,960	#8279	78	542,880	:	4,784	1.4548
I-6	97-107 TURNER	14,160	#8261	12	169,920	:	7,152	1.9799
I-8	9-23 TURNER - 2 ELC	16,880	#8281	6	101,280	:	9,520	1.7731
J	33-35 BARKLEY	758	#7015	190	144,020	:	2,016	0.3760
R	119-121 HATLER	6,007	#8843	44	264,308	:	2,995	2.0057
R-4	71-77 HATLER	4,880	#8829	55	268,400	:	4,992	0.9776
K	10-12 BURR ST.	2,525	#8357	116	292,900	:	2,016	1.2525
L	87 SPECKER (AVG)	1,407	#7121	13	22,638	:	1,567	1.1113
O	62-64 MONTROSE	2,340	#7350	21	49,140	:	2,432	0.9622
U-4	40-46 FRIZELL	4,000	#9552	30	120,000	:	4,332	0.9234
U-6	1-11 YOUNG (EMPTY)	0	#9601	16	0	EMP	6,498	0.0000
U-8	104-118 INDIANA	0	#9052	7	0	EMP	8,664	0.0000
V	32-34 ELWOOD	33	#9456	45	1,485	:	2,970	0.0111
V-4	129-135 INDIAN (AVG)	0	#9043	26	0	EMP	5,442	0.0000

FH ELECTRIC BILL -- 2



K	10-12 BURR ST.	2,525	#8357	116	292,900	:	2,016	
L	87 SPECKER (AVG)	1,407	#7121	13	22,638	:	1,567	
O	62-64 MONTROSE	2,340	#7350	21	49,140	:	2,432	0.9622
U-4	40-46 FRIZELL	4,000	#9552	30	120,000	:	4,332	0.9234
U-6	1-11 YOUNG (EMPTY)	0	#9601	16	0	EMP	6,498	0.0000
U-8	104-118 INDIANA	0	#9052	7	0	EMP	8,664	0.0000
V	32-34 ELWOOD	33	#9456	45	1,485	:	2,970	0.0111
V-4	129-135 INDIAN (AVG)	0	#9043	26	0	EMP	5,442	0.0000
W	33-35 IMMELL	0	#9109	81	0	EMP	2,908	0.0000
W-4	87-93 DIAMOND	2,080	#9337	17	35,360	:	5,816	0.3576
W-6	25-35 BOQUET	0	#9111	3	0	EMP	8,724	0.0000

June	Family Housing usage			KWH'S					
OFFICER'S HOUSING TOTAL USAGE:				659,154					
NCO HOUSING TOTAL USAGE:				2,142,747					
SUBTOTAL:				2,801,902					
LIFT STATION & STREET LIGHTS:				19,740					
(658 KWH/DAY X 30 DAYS MTH)									
TOTAL MONTHLY USAGE-->				2,821,642		KWH'S			
FAMILY HOUSING COST PER KWH:				\$0.0524		\$ / KWH			
TOTAL MONTHLY COST-->				\$147,854.04					
MONTHLY KWH ON METERS:				83,287		KWH			
METERED FT2:				74,945		FT2			
AVERAGE KWH/FT2/MTH:				1.1113		KWH/FT2/MTH			
TOTAL FT2:				2,957,660		FT2			

CG & DCG BILLINGS



								MTH USE FT2	MTH COST FT2
			USE	UNITS	UNIT COST	TOTAL COST	FT2		
#1 ESSAYONS ST. (CG) (Pg. 147-148)									
	Electric		3,076	KWH	\$0.0524	\$161.18	6,131	0.5017	\$ 0.0263
	Nat Gas		2,900	CuFt	\$0.0783	\$227.14	6,131	0.4730	\$ 0.0370
	Water	6 People	22.8125	Kgal	\$0.5434	\$12.40	6,131	0.0037	\$ 0.0020
	Sewer		18.2500	Kgal	\$1.0351	\$18.89	6,131	0.0030	\$ 0.0031
#2 ESSAYONS ST. (DCG) (Pg. 149-150)									
	Electric		2,381	KWH	\$0.0524	\$124.76	5,224	0.4558	\$ 0.0239
	Nat Gas		1,800	CuFt	\$0.0783	\$140.98	5,224	0.3446	\$ 0.0270
	Water	2 People	7.6042	Kgal	\$0.5434	\$4.13	5,224	0.0015	\$ 0.0008
	Sewer		6.0833	Kgal	\$1.0351	\$6.30	5,224	0.0012	\$ 0.0012
#3 ESSAYONS ST. (MP CMDT) (Pg. 150a-150b):					(These are estimates, to be adjusted once meter readings are attained)				
	Electric		2,680	KWH	\$0.0524	\$140.43	4,527	0.5920	\$ 0.0310
	Nat Gas		1,700	CuFt	\$0.0783	\$133.15	4,527	0.3755	\$ 0.0294
	Water	2 People	7.6042	Kgal	\$0.5434	\$4.13	4,527	0.0017	\$ 0.0009
	Sewer		6.0833	Kgal	\$1.0351	\$6.30	4,527	0.0013	\$ 0.0014
#4 ESSAYONS ST. (ENGR CMDT)(Pg. 150c-150d):					(These are estimates, to be adjusted once meter readings are attained)				
	Electric		2,080	KWH	\$0.0524	\$108.99	4,528	0.4594	\$ 0.0241
	Nat Gas		1,400	CuFt	\$0.0783	\$109.65	4,528	0.3092	\$ 0.0242
	Water	3 People	11.4063	Kgal	\$0.5434	\$6.20	4,528	0.0025	\$ 0.0014
	Sewer		9.1250	Kgal	\$1.0351	\$9.45	4,528	0.0020	\$ 0.0021

Fort Leonard Wood



Fort Leonard Wood

THE CANTONMENT AREA (OMA) 9,763,000 FT² OR 75.3%
THE FAMILY HOUSING AREA (FH) 3,198,000 FT² OR 24.7%

FAMILY HOUSING, AT FY01 YEAR END, WAS COMPOSED OF:

- . 3,198,000 FT² OF LIVING SPACE
- . 1,062 BUILDINGS
- . 6,218 TONS OF AIR CONDITIONING

ELECTRIC & NATURAL GAS COST AN AVERAGE OF
\$1.6820 PER FY²/YR FOR FAMILY HOUSING

Family Housing – FY01 Electrical Billing Procedures



- THERE ARE 1,062 BUILDINGS
- ONLY 74,945 FT², OR 2.34%, IS METERED
- THE METERED FT² IS COVERED BY 34 METERS
- THE AVG METERED USE/FT² IS DETERMINED AND THAT FACTOR IS APPLIED TO THE UNMETERED FT² TO DETERMINE USAGE
- FH CONSUMED 33,438,910 KWH'S, OR 19.4%, OF THE TOTAL FLW USE OF 172,253,397 KWH'S.
- FH REIMBURSED DPW \$1,571,907, OR 23.4%, OF THE TOTAL SHO ME POWER INVOICE OF \$6,730,211.72
- FH ALSO REIMBURSES FOR STREET LIGHTS AT AN AVERAGE USE OF 658 KWH PER DAY. METERS ARE NOT AVAILABLE HERE.

Family Housing – FY01

Natural Gas Billing Procedures



- THREE PRV STATIONS METER FH NATURAL GAS INTAKE
- THERE ARE ALSO OTHER USERS ON THESE METERS THAT HAVE TO BE BACKED OUT OF TOTAL USAGE BEFORE THE FH PORTION OF THE BILL IS DETERMINED.
- FH CONSUMED 207,767 MBTU'S, OR 25.2%, OF THE TOTAL 825,305 MBTU'S CONSUMED BY FLW.
- FH REIMBURSED DPW \$3,807,043, OR 38.3%, OF THE TOTAL \$9,947,164.33 SPENT BY FLW FOR NATURAL GAS.
- A NEW PROPANE AIR PLANT IS ON LINE TO REDUCE THE COST OF HEATING AND TO PROVIDE A BACKUP WHEN PEAKS ARE EXCEEDED OR SUPPLIES OF NATURAL GAS ARE SHORT.

Family Housing – FY01 Water & Sewer Procedures



- DRM HAS BEEN DETERMINING THE AMOUNT TO CHARGE FH BASED UPON FUNDING AVAILABLE BETWEEN DPW AND FH
- FH SHOULD BE CHARGED AT LEAST 120 GALLONS PER PERSON PER DAY FOR WATER
- FH SHOULD BE CHARGED 96 GALLONS PER PERSON PER DAY, OR 80% OF THE WATER, FOR SEWER
- THE PERCENTAGE OF WATER CONSUMED AND SEWER PROCESSED IS RECALCULATED EACH YEAR AND THAT VARYING PERCENTAGE CAN BE APPLIED TO BILLINGS.
- METERING DEVICES SHOULD BE INSTALLED BUT HAVE NOT BEEN DUE TO THE CHEAPNESS OF WATER & SEWER HERE AT FLW. IT WOULD NOT BE COST EFFECTIVE TO INSTALL THEM.

Family Housing – FY01

Water & Sewer Costs



	Water	Sewer
FY98	\$125,000	\$172,000
FY99	\$122,000	\$169,000
FY00	\$113,000	\$156,000
FY01	\$115,000	\$159,000